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University of Bahrain

Department of Computer Science

College of Information Technology

ITCS332: Concepts of Programming Languages

QUIZ#1: Chapter 1

True/False Question:

- 1) ☒ JAVA programs are faster in compilation than equivalent C++ programs.
- 2) ☐ Microsoft .NET languages are implemented with JIT systems.
- 3) ☐ Perl language is an example of interpreting systems.
- 4) ☐ Checking array subscripts against the acceptable ranges is always done during run-time.
- 5) ☐ Aliases are good for reliability.
- 6) ☐ Programs are executed faster in interpreting systems than in compiled systems.
- 7) ☒ Compile-time type checking is cheaper and desirable than run-time type checking.

Fill in blanks Question:

- 8) Give 2 issues (factors) that reduce the overall simplicity of a programming language :
~~Multiplicity~~ - Operator overloading
~~Androgyny~~ - Multiplicity
- 9) The compiler phase that constructs the parse tree is called Syntax Analysis
- 10) The main bottleneck in von Neumann architecture is CPU-Mem speed gap

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QUIZ#1: Chapter 1

***** QUIZ#1: Chapter 1 *****

- 1) T C++ programs are less reliable than semantically equivalent Java programs.
- 2) F In interpreting systems each statement is decoded only once.
- 3) F Checking array subscripts against the acceptable ranges reduces reliability and the cost.
- 4) F JAVA programs are faster in execution than equivalent C++ programs.
- 5) T Performing type checking during compilation improves reliability and reduces the cost.
- 6) T Programs written in APL are better writeable than equivalent C++ programs.
- 7) F Operator overloading is good for readability of programs.

Fill in blanks Question:

- 8) JAVA programs are more reliable than equivalent C++ programs. Give 2 reasons.
- JAVA performs type checking but C++ does not.
- JAVA performs index “ “ “ “
- 9) The compiler phase that converts the input string into lexemes is called scanner
- 10) The main bottleneck of interpreting systems is statement decoding

Student Name: Awal Awal

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ITCS332: Concepts of Programming Languages

QUIZZ#1: Chapter 1

True/False Questions:

- *****
1. False Run-time type checking is cheaper and desirable than compile-time type checking.
 - X 2. false APL designers traded readability for writeability.
 - ✓ 3. false Java programs are less reliable than semantically equivalent C++ programs.
 - X 4. True The larger the number of operators in a language, the worse the writeability and the better the readability of programs.
 - ✓ 5. false Demanding all subscripts of array references to be checked against acceptable range increases reliability and decreases the cost of a PL.

Fill in blanks Questions:

6. The presence of two or more distinct referencing methods or names for the same memory location is called aliasing.
7. An example of process abstraction is subprogram (Functions / process) ~~preprocessor~~ (~~#define~~) X
8. Name a programming language that fits business domain is COBOL
9. A program is said to be reliable if it conforms to its specifications under all circumstances.
10. The main bottleneck in von Neumann computers is speed of moving instructions from memory
11. Type checking may be performed during run-time or compiling-time

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QUIZZ#1: Chapter 1

True/False Questions:

1. F Run-time type checking is cheaper and desirable than compile-time type checking.
2. T APL designers traded readability for writeability.
3. F Java programs are less reliable than semantically equivalent C++ programs.
4. F The larger the number of operators in a language, the worse the writeability and the better the readability of programs.
5. F Demanding all subscripts of array references to be checked against acceptable range increases reliability and decreases the cost of a PL.

Fill in blanks Questions:

6. The presence of two or more distinct referencing methods or names for the same memory location is called Aliases.
7. An example of process abstraction is subprogram (functions, procedures).
8. Name a programming language that fits business domain is COBOL.
9. A program is said to be Reliable if it conforms to its specifications under all circumstances.
10. The main bottleneck in von Neumann computers is CPU-MEM speed gap.
11. Type checking may be performed during compilation
or execution

Student Name: Ahmed Yousif Ghazwan Student id: 2037180 Sect #: 1 Serial #: 2

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Department of Computer Science

College of Information Technology

ITCS332: Concepts of Programming Languages

QUIZ#1: Chapter 1

True/False Question:

- 1) False JAVA programs are faster in compilation than equivalent C++ programs.
- 2) True Languages with simulated features are better than languages with integrated ones.
- 3) True Constructs included in a programming language are selected by a language implementer.
- 4) True A program is readable if it conforms to its specifications under all circumstances.
- 5) True Reducing the feature multiplicity improves the language readability.
- 6) True In interpreted systems every time the same line is executed it must be decoded.

Fill in blanks Question:

- 7) A Syntax or parse tree is a data structure used by a compiler to store information about program symbols.
- 8) The scanner accepts as input characters or symbols and generates as output lexical units.
- 9) JAVA programs are more reliable than equivalent C++ programs. Give 2 reasons.

Type checking before compile and fast execution
index checking plus no use of pointers in java
language - where?

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QUIZ#1: Chapter 1

True/False Question:

- 1) F JAVA programs are faster in compilation than equivalent C++ programs.
- 2) F Languages with simulated features are better than languages with integrated ones.
- 3) F Constructs included in a programming language are selected by a language implementer.
- 4) F A program is readable if it conforms to its specifications under all circumstances.
- 5) T Reducing the feature multiplicity improves the language readability.
- 6) T In interpreted systems every time the same line is executed it must be decoded.

Fill in blanks Question:

- 7) A **Symbol Table** is a data structure used by a compiler to store information about program symbols.
- 8) The scanner accepts as input **a string of characters** and generates as output **a set of lexemes**
- 9) JAVA programs are more reliable than equivalent C++ programs. Give 2 reasons.
 - **Pointers are NOT allowed in JAVA and allowed in C++.**
 - **Array index is checked against boundaries in JAVA and NOT checked in C++.**

Student Name: Ali A. Hussain Emwani Student id: 2003642 Section #: A

University of Bahrain
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ITCS332: Concepts of Programming Languages

QUIZZ#1: Chapter 1

True/False Questions:

1. F Run-time type checking is cheaper and desirable than compile-time type checking.
2. T APL designers traded readability for writeability.
3. F Java programs are less reliable than semantically equivalent C++ programs.
4. F Operator overloading improves both readability and writeability.
5. F Demanding all subscripts of array references to be checked against acceptable range improves the reliability and decreases the cost of a PL.

Fill in blanks Questions:

6. The presence of two or more distinct referencing methods or names for the same memory location is called Aliasing.
7. An example of process abstraction is Functioning.
8. Name a programming language that fits business domain is Cobol.
9. The compiler phase that generates the intermediate code is called Semantics Analysis.
10. The main bottleneck in von Neumann computers is Mem-CPU ^{speed} Gap.
11. Type checking may be performed during execution
or compilation.

Student Name: Mohammed Abdullah Raadhi

Student id: 200524110 Section #:

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QUIZZ#1: Chapter 1

True/False Questions:

1. FW Java programs are less reliable than semantically equivalent C++ programs.
2. FW The larger the number of operators in a language, the worse the writeability and the better the readability of programs.
3. FW Demanding all subscripts of array references to be checked against acceptable range increases reliability and decreases the cost of a PL.
4. FW Run-time type checking is cheaper and desirable than compile-time type checking.
5. TV APL designers traded readability for writeability.

Fill in blanks Questions:

6. Name a programming language that fits business domain is COBOL
7. A program is said to be reliable if it conformsto its specifications under all circumstances.
8. The main bottleneck in von Neumann computers is Mem-CPU speed gap
9. Type checking may be performed during compiling or exccution
10. The presence of two or more distinct referencing methods or names for the same memory location is called aliasing
11. An example of process abstraction is Functions

Student Name: Ali A. Hussain

Student id: 20-36424 Section #: 1

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QUIZZ#1: Chapter #1 : Introduction

True/False Questions:

1. T Increasing the number of basic constructs improves the readability of a language.
2. T Reducing the number of exceptions increases the degree of orthogonality.
3. F Checking references to array elements is performed during execution time.
4. F Java programs are less reliable than semantically equivalent C++ programs.
5. T Compile-time type checking is cheaper and desirable than run-time type checking.

Fill in blanks Questions:

6. A language in which computations are done by applying functions to arguments is called impure.
7. Name an example of programming language that fits business domain is COBOL.
8. The main bottleneck in von Neumann computers is Memory - CPU speed / gap.
9. Name 2 issues that influence the language reliability: computer Architecture or Programming methodologies.
10. The presence of two or more distinct referencing methods or names for the same memory location is called Aliases.
11. The compiler phase that constructs a parse tree from the program lexemes is called syntactic Analysis.

Student Name: Sayed Abbas Hashim Student id: 2006AS38 Sect #: 1 Serial #:

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QUIZZ#1: Chapter 1

True/False Questions:

1. T JAVA designers traded pointers for language reliability.
2. T Array subscripts are usually checked against the acceptable ranges during the run-time.
3. F Programs executed in compiled systems are slower than those in interpreting ones.
4. F Nowadays, the most commonly used programming languages are interpreting languages.
5. T Demanding all type checking to be performed increases both the reliability and the cost of a programming language.

Fill in blanks Questions:

6. The main bottleneck in von Neumann architecture is CPU-Mem speed Gap.
7. Type checking may be performed during execution or compilation.
8. The presence of two or more distinct referencing methods or names for the same memory location is called Aliasing.
9. An example of process abstraction is subprogram (calls, functions, procedures).
10. Name a programming language that fits AI applications is prolog.
11. The compiler phase that constructs the parse tree is called syntax analysis.

Mem-CPU speed Gap

Student Name: _____

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QUIZZ#1: Chapter 1

Fill in blanks Questions:

1. The language design is influenced by 2 factors: ✓ Programming Methodology and ✓ Computer Architecture.
2. The bottleneck of interpreting systems is ✓ statement decoding.
3. The compiler phase that converts the source program characters into lexical units is called ✓ Scanner.
4. The language category that mainly based on the concepts of data abstraction and inheritance is called ✓ Object Oriented.
5. Name a programming language that fits the scientific application is ✓ Fortran.
6. A ✓ Preprocessor is a program that processes a program immediately before it is compiled.

True/False Questions:

1. ✓ T JAVA designers traded pointers for language reliability.
2. ✓ F Array subscripts are usually checked against the acceptable ranges during the link-time.
3. ✓ T Programs executed in compiled systems are faster than those in interpreting ones.
4. ✓ T Nowadays, the most commonly used programming languages are compiled languages.
5. ✓ T Demanding all type checking to be performed increases both the reliability and the cost of a programming language.

1) Programming methodologies
2) Computer architecture

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True/False Questions:

1. F Run-time type checking is cheaper and desirable than compile-time type checking.
2. T APL designers traded readability for writeability.
3. F Java programs are less reliable than semantically equivalent C++ programs.
4. F Operator overloading improves both readability and writeability.
5. F Demanding all subscripts of array references to be checked against acceptable range improves the reliability and decreases the cost of a PL.

Fill in blanks Questions:

6. The presence of two or more distinct referencing methods or names for the same memory location is called ALIASES.
7. An example of process abstraction is Procedure calls.
8. Name a programming language that fits business domain is COBOL.
9. The compiler phase that generates the intermediate code is called symanitic analysis.
10. The main bottleneck in von Neumann computers is CPU-MEM speed gap.
11. Type checking may be performed during compilation
or Execution.